ENVIRONMENTAL CHEMISTS

Date of Report: 09/28/99 Date Received: 09/09/99

Project: Metro Self Monitor, PO# M62544

Date Samples Extracted: 09/14/99

Date Extracts Analyzed: 09/20/99 & 09/22/99

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID		<u>Chromium</u>	Copper	Nickel	<u>Zinc</u>
M62544		0.22	0.15	0.12	<0.05.
Method Bla	ank	< 0.05	< 0.05	< 0.05	< 0.05

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Date of Report: 09/28/99 Date Received: 09/09/99

Project: Metro Self Monitor, PO# M62544

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 909015-01 (Duplicate)

				Relative		
	Reporting	Sample	Duplicate	e Percent	Acceptan	ce .
Analyte	Units	Result	Result	Difference	e Criteria	l
Chromium	mg/L (ppm)	< 0.05	< 0.05	nm	0-20	N.
Copper	mg/L (ppm)	0.45	0.40	12	0-20	
Nickel	mg/L (ppm)	< 0.05	< 0.05	nm	0-20	
Zinc	mg/L (ppm)	1.0	1.0	0	0-20	

Laboratory Code: 909015-01 (Matrix Spike)

	Reporting	Spike	Sample	% Recov	ery % Recov	ery Accept	ance
Analyte	Units	Level	Result	MS	MSD	Crite	ria RPD
Chromium	mg/L (ppm)	5	< 0.05	116	114	80-1	20 2
Copper	mg/L (ppm)	5	0.45	102	99	80-1	20 3
Nickel	mg/L (ppm)	10	< 0.05	104	104	80-1	20 0
Zinc	mg/L (ppm)	5	1.1	106	106	80-1	20 0

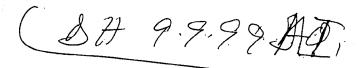
Laboratory Code: Laboratory Control Sample

	Reporting	Spik	e %	Recov	ery % Reco	very	Acceptanc	e		100
Analyte	Units	Leve	el	LCS	LCS	D	Criteria	5 (1)	RPD	19.3
Chromium	mg/L (ppm)	5		97	110		80-120		13	
Copper	mg/L (ppm)	5		107	103		80-120		4	
Nickel	mg/L (ppm)	10		99	111		80-120		11	
Zinc	mg/L (ppm)	5		95	119		80-120		22 vo	

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282



SAMPLE CHAIN OF CUSTODY

Send Report To: Company Alask	AN Coppe	e works		.	0	1 -	1 .	
Address 628 HA	want s	C -001005		Contac	t_\TERA	40 H. 16	rompson	
City, State, Zip Sease	le wi	4 98134						
Phone #(206) 382-8			206) 3	382-4509	Da	ite <u>9-9-99</u>		
SITE NO.	* .	PROJE	CT NAME	}	P	URCHASE ORDE	R #	
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SAMPLERS (signature) PROJECT LOC								
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REMARKS -					SAMPLE	DISPOSAL INFO	RMATION	
					Re	spose after 30 day		
	Date/Time	True of	# of		Ca	ll for Instructions		
Sample #	Sampled	Type of Sample	# 01 Jars	Lab Sample #		Analyses Requeste		
m62544	9-9-99	HzO	/	00		CV Wi		
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SIGNATURE		PRINT NAME		COMPANY	Y	Date	Time	
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Received by:								

FORMS/COC

08/26/99

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

September 28, 1999

DUPLICATE COPY

INVOICE #99ACU0928-2

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M62544: Results of testing requested by Gerry Thompson for material submitted on September 9, 1999.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ \$80 per sample \$80.00

Amount Due \$80.00

PLEASE NOTE: As a convenience for our valued clients, we can accept credit cards (VISA, MasterCard or government purchasing cards) for payment on our invoices. Please contact our office if you would like to take advantage of this service.

FEDERAL TAX ID (b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

September 28, 1999

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on September 9, 1999 from your Metro Self Monitor, PO# M62544 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Dianne C. Huit

Dianne C. Hurt Project Manager

Enclosures ACU0928R.DOC